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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/394,514	09/13/1999	TAKAO OGAWA	0102/0074	4339

7590

12/26/2001

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EXAMINER

COLON, CATHERINE M

ART UNIT	PAPER NUMBER
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2163

DATE MAILED: 12/26/2001

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/394,514

Applicant(s)

OGAWA ET AL.

Examiner

C. Michelle Colon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2001.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 13, 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.      6) ☐ Other:

### **DETAILED ACTION**

1. The following is a Final Office Action in response to the communication received on November 13, 2001. Claims 1 and 3 have been amended. Claims 6 and 7 have been added. Claims 1 – 7 are now pending in this application.

#### ***Information Disclosure Statement***

2. The examiner has reviewed the publications supplied in the Information Disclosure Statement (IDS) provided on November 21, 2001.

#### ***Response to Amendments***

3. Applicant's amendment to claim 1 overcomes the objection as indicated in the previous Office Action. Hence, the previous informality objection to a missing definition for the acronym "ETC" is withdrawn accordingly.

4. Applicant's amendment to claim 3 overcomes the § 112 rejection as indicated in the previous Office Action. Hence, the previous vague and indefinite rejection is withdrawn accordingly.

#### ***Response to Arguments***

5. Applicant's arguments with regard to Figures 1 – 4 have been fully considered but are not persuasive. The applicant provides page 3, lines 21 – 22 as evidence to support that Figures 1 – 4 are not prior art. However, the lines simply indicate that the

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Figures "are not prior art against this invention", which is not persuasive evidence.

Furthermore, page 3, lines 19 – 21 indicate that the Figures 1 – 3 are background-art for the ETC system. Any figures that are not directed to the instant invention, but represent art that is known prior to the invention should be labeled as "Prior Art."

In addition, the descriptions for Figures 1 – 4 read very similar to the portion of the specification that refers to the ETC invention. Furthermore, Figures 1 and 2 have drastic similarities to Figure 5, which is a claimed embodiment of the tollgate for the ETC invention. In order to differentiate the figures that are drawn to the invention from those that are drawn to another invention, the drawings should be labeled as "Prior Art."

Therefore, based on the reasons stated above, the applicant's arguments are found not persuasive and objections to the drawings from paper number five are maintained. The drawing objections are reproduced below for the applicant's reference.

6. Applicant's arguments with regard to the § 102 rejection based on Hasset et al. have been fully considered but are not persuasive. The applicant recites the following about the invention of claim 1:

"... 1) second means for deciding whether or not a radio response to the radio signal is received via the antenna; 2) third means for, in cases where the second means decides that a radio response to the radio signal is received, judging that there is an ETC vehicle incoming; and 3) fourth means for, in cases where the vehicle sensor detects a vehicle while the second means decides that a radio response to the radio signal is not received, judging that there is a non-ETC vehicle incoming."

The invention as disclosed by Hassett et al., while serving a different purpose than that of the ETC system, does contain the limitations recited in claim 1 as well as

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the limitations of the subsequent claims. In particular, Hassett et al. disclose a vehicle transceiver that, after receiving an initial signal from the stationary toll transceiver, transmits a signal back to the stationary toll transceiver (col. 3, lines 2 – 16). It is irrelevant as to the purpose of the back-and-forth transceiver transmissions. What is relevant is that these features of the Hassett et al. invention are the same limitations recited in claim 1, and in particular, are the same as the “second means” as recited above. Furthermore, the invention by Hassett et al. discloses that the vehicle transceiver transmits vehicle identification information to the stationary toll transceiver, this corresponding to the “third means” limitation recited above. Finally, according to the invention by Hassett et al., based on the type of transmission sent from the vehicle to the stationary toll transceiver (i.e., a signal indicating anything other than an “ETC vehicle signal” can be construed as a “non-ETC vehicle signal”), or by default no transmission at all is received by the stationary toll transceiver, the stationary toll transceiver then has a means for judging if a non-ETC vehicle is coming, and thus the “fourth means” is addressed. Therefore, as previously stated, while the invention of Hassett et al. is used for purposes other than what is intended by the ETC system, it does contain all of the embodiments recited in claim 1.

The applicant further maintains that because the Hassett et al. system contains radio communication that is implemented between a mobile transceiver and a stationary transceiver, the invention fails to teach the limitations of claim 1. The examiner respectfully disagrees and further asserts that as claim 1 is recited, its features can be

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met, and have through the invention of Hassett et al., utilizing radio communication implemented between a mobile transceiver and a stationary transceiver.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "The instant invention (ETC)... detects... a ETC vehicle **from which toll charges can be automatically collected...**") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that **"...the Hassett system is directed to... determining whether a vehicle is in a proper lane of a multiple lane toll plaza,"** a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Therefore, based on the reasons stated above, the applicant's arguments are found not persuasive and the prior 102 rejections for claims 1 – 5 from paper number five are maintained. The 102 rejections for claims 1 – 5 are reproduced below for the applicant's reference.

***Drawings***

7. Figures 1 – 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Correction is required.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hassett et al. (U.S. 5,406,275).

Claim 1 is anticipated by Hassett in col. 2, lines 55 – 62. Hassett discloses a highly directional antenna that transmits a radio-frequency signal. The radio signal broadcast creates a field pattern that is directed along a roadway. Hassett further discloses in col. 2, line 66 – col. 3, line 12 that a vehicle transceiver, once it reaches the antenna's radio signal field pattern at a fixed location along the roadway, by processing information received from the field pattern, can determine the vehicle's lane position as well as the vehicle's position relative to the antenna. Hassett further discloses in col. 3, lines 13 – 16 that the antenna can also receive radio-frequency signals from the vehicle transceiver to determine the type of vehicle that is oncoming. The antenna will not receive radio-signals from a vehicle transceiver if a vehicle transceiver does not cross

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the threshold along the roadway of the radio-frequency field pattern; therefore the antenna also acts as a vehicle sensor.

Claim 2 is anticipated by Hassett in col. 5, lines 21 – 24 where Hassett discloses that the radio-frequency generated by the antenna can be transmitted intermittently or continuously.

Claim 3 is anticipated by Hassett in col. 5, lines 18 – 21. Hassett discloses that the radio signal strength patterns can be altered to indicate a position relative to the antenna; therefore the signal length along the roadway can also be altered.

Claim 4 is anticipated by Hassett in Figure 3 and Figure 3's description. In col. 5, lines 15 – 21, Hassett discloses that the radio signal strength measurement used by his claimed invention corresponds to half the length of the defined roadway. Figure 3 indicates that the roadway has a length of 40 feet, half of which is 20 feet. Claim 4 indicates a radio-communication service zone of 6.5 meters along a lane, which equates to about 21.32 feet.

Claim 5 is anticipated by Hassett in col. 2, lines 55 – 56 where Hassett discloses that at least one antenna is required. As discussed above, the antenna, in Hassett's embodiment, also acts as a vehicle sensor.

As per claim 6, Hassett et al. disclose an ETC (Electronic Toll Collection) system, comprising:

an antenna (col. 2, lines 55 – 58);



transceiver means working cooperatively with said antenna for outputting a radio signal at a given rating level to cover a limited radio-communication service zone (col. 2, lines 55 – 62; Figures 1 – 3);

a vehicle sensor for detecting whether a vehicle has reached a predetermined position in said limited radio-communication zone (col. 2, line 66 – col. 3, line 16; According to the invention of Hassett et al, the stationary transceiver functions as a vehicle sensor because the vehicle transceiver begins to receive signals only after it reaches the limited radio-communication zone. Once it reaches the limited radio-communication zone, the vehicle transceiver can send signals back to the stationary transceiver. By sensing that signals are being received from vehicles that have to be within the limited radio-communication zone, the stationary transceiver knows that a vehicle is coming.);

said transceiver means further working cooperatively with said antenna for detecting radio response to said radio signal from each vehicle detected by said vehicle sensor within said radio-communication zone (col. 2, line 66 – col. 3, line 16); and

processor means for deciding a vehicle that has been detected by said vehicle sensor in said radio-communication zone is a non-ETC vehicle if no radio response to said radio signal is detected from said vehicle (col. 2, line 66 – col. 3, line 16; Once it reaches the limited radio-communication zone, the vehicle transceiver can send signals to the stationary transceiver indicating specific vehicle identification information. By not receiving a specific signal in response to a sent radio signal, the stationary transceiver

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can decipher the type of vehicle that is incoming (i.e., the stationary transceiver can tell whether or not the vehicle is an ETC vehicle).

As per claim 7, Hassett et al. disclose an ETC system of claim 6, wherein said processor means decides a vehicle that has been detected by said vehicle sensor in said radio-communication zone is an ETC vehicle if a radio response to said radio signal is detected from said vehicle (col. 2, line 66 – col. 3, line 16; Once it reaches the limited radio-communication zone, the vehicle transceiver can send response signals to the stationary transceiver indicating its vehicle identification information. By sending response signals containing specific information, the stationary transceiver can decipher the type of vehicle that is incoming (i.e., the stationary transceiver can tell whether or not the vehicle is an ETC vehicle)).

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***Conclusion***

10. No claims allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Michelle Colon whose telephone number is 703-605-4251. The examiner can normally be reached Monday – Friday from 8:30am to 5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached at 703-305-9643.

The fax numbers for the organization where this application or proceeding is assigned are as follows:

703-746-7238	[After Final Communication]
703-746-7239	[Official Communications]
703-746-7240	[For status inquiries, draft communication]

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CMC  
December 20, 2001

  
Kyle Choi  
Patent Examiner  
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